

REMARKS

Claims 102-143, 156-189, and 193-200 are pending in the subject application. Claims 129, 160, 176, 184, and 195 have been withdrawn in response to a restriction requirement. In the present Office Action, claims 126, 128, 130-143, 157, 159, 161-174, 183, 185-189, 194, and 196-200 stand rejected under 35 U.S.C. § 112, second paragraph, as assertedly being indefinite. Claims 102-124, 126-128, 130-142, 156-159, 161-173, 175, 178-183, 186-189, 193, 194, and 197-200 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by EP 1 127 495 ("EP '495"). Claims 102-128, 130-143, 156, 157, 159, and 161-174 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by EP 0 565 260 ("EP '260"). Claims 102-128, 130-143, 156-159, 161-175, 177-189, 193, 194, and 196-200 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by U.S. Patent No. 6,244,528 to Wallis et al. ("Wallis"). Claims 102-128, 130-143, 156-159, and 161-174 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by any one of U.S. Patent No. 3,639,129 to Mustakas et al ("Mustakas"), GB 1400470 ("GB '470"), U.S. Patent No. 4,902,526 to Sudo et al. ("Sudo") or JP 60-141247. Claims 175, 178-183, 186-189, 193, 194, and 196-200 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by WO 2001/64055 ("WO '055"). Claims 175, 178-183, 186-189, 193, 194, and 196-200 stand rejected under 35 U.S.C. § 102(e) as assertedly being anticipated by U.S. Patent No. 6,149,962 to Loh et al. ("Loh"). Applicants traverse these rejections for the reasons set forth herein.

Claims 126, 156, 157, 183, 193, and 194 have been amended to delete the letter identifiers in front of each member of the Markush group or step in the process. No new matter is added by these amendments

New claims 201-204 have been added. Support for the subject matter of new claims 201-204 may be found, for example, in the specification as published at paragraph [0074] and [0082].

35 U.S.C. § 112, Second Paragraph

Claims 126, 128, 130-143, 157, 159, 161-174, 183, 185-189, 194, and 196-200 stand rejected under 35 U.S.C. § 112, second paragraph, as assertedly being

indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner states that the recited claims are indefinite in that it is not clear what is encompassed by the terminology “simulated meat product” and “simulated milk product.” Applicant respectfully directs the Examiner’s attention to paragraphs [0029] and [0030] of the specification, as published, which recite Applicant’s definitions for “simulated meat food product” and “simulated milk product”, respectively.

In view of Applicant’s definition of the terminology in the specification, Applicant respectfully asserts that the terms are not unclear and the claims are not indefinite under the second paragraph of 35 U.S.C. § 112. Applicant respectfully requests that the rejection of the claims be withdrawn.

Rejections under 35 U.S.C. §§ 102(b) and (e)

EP ‘495

Claims 102-124, 126-128, 130-142, 156-159, 161-173, 175, 178-183, 186-189, 193, 194, and 197-200 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by EP 1 127 495 (“EP ‘495”). Applicant traverses this rejection for the following reasons.

Independent claim 102 of the subject application is directed towards a soya fiber particulate having a particle size in a range of about 0.01 microns to about 100 microns, wherein at least about 50% to about 100% of the particles of the soya fiber particulate has a size range of about 0.01 microns to about 35 microns, where the soya fiber particulates have open portions therein such that water or a water based liquid is allowed into intracellular spaces of the soya fiber particulate. Independent claim 175 of the subject application is directed toward a grain fiber particulate having a particle size in a range of about 0.01 microns to about 100 microns, wherein at least about 50% to about 100% of the particles of the grain fiber particulate has a size range of about 0.01 microns to about 35 microns, where the grain fiber particulates have open portions therein such that water or a water based liquid is allowed into intracellular spaces of the grain fiber particulate.

For a reference to be anticipatory under 35 U.S.C. § 102, it is axiomatic that the reference must teach, either explicitly or inherently, each and every element of the invention as set forth by the claims. However, the MPEP states that the mere "fact that a certain result or characteristic *may* occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." MPEP § 2112IV. *See also In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (emphasis added). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999); *see also* MPEP § 2112IV. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

The Examiner states that EP '495 discloses a ground soy product having a median particle size of between 10-20 microns, wherein the ground soy product is used in various food compositions and wherein the product would be expected to have open portions such that water or a water based liquid is allowed into intracellular spaces since the same has been ground to such a fine level. The Examiner also states that it is expected that the product would have the stability as recited in the instant claims due to the similarity in processing and the dry nature of the product.

Applicant respectfully disagrees that the EP '495 product would inherently have the same open portions of the soya fiber particulate of claim 102 or the grain fiber particulate of independent claim 175. There is no indication that the EP '495 particulates would have the same characteristics as the soya fiber particulate of claim 102 or the grain fiber particulate of independent claim 175. For example, EP '495 uses dry grinding, whereas the soya fiber particulate of claim 102 and the grain fiber particulate of claim 175 are produced by wet grinding. Dry grinding in the presence of oxygen may result in oxidation of the seed oil in the particles (particularly if the

lipoxidase enzymes are not deactivated prior to grinding), whereas wet grinding necessarily is in the absence of oxygen thereby minimizing seed oil oxidation. Further, the EP '495 process results in two fractions: a fine fraction having 50% grain size of a few μm to several tens of μm and a coarse fraction having 50% grain size of several tens of μm to several hundreds of μm (EP '495, page 4, paragraph [0029]), which are then separated by size (classified) using compressed air, whereas in the subject application discloses that the soya fiber particulate of claim 102 and the grain fiber particulate of claim 175 having the claimed sizes are formed without a size separation step. Finally, the EP '495 particulates show greater sedimentation that are observed with the soya fiber particulate of claim 102 and the grain fiber particulate of claim 175. For example, the EP '495 particulates show from 3% to 7% sedimentation after 24 hours at standard gravity (1G) (see, EP '495, Example 8, pages 9-10 and Table 12), whereas the soya fiber particulate of claim 102 and the grain fiber particulate of claim 175 have a sedimentation rate of less than about 5% by volume when centrifuged at a centrifugal force of at least 50 times the force due to earth's gravity (50G) for 5 minutes. Given these differences in characteristics between the EP '495 particulates and the soya fiber particulate of claim 102 and the grain fiber particulate of claim 175 (which may result from the different processing conditions), there is no evidence that the EP '495 particulates would inherently have the same structure as the soya fiber particulate of claim 102 and the grain fiber particulate of claim 175. Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) over EP '495 be withdrawn.

EP '260

Claims 102-128, 130-143, 156, 157, 159, and 161-174 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by EP 0 565 260 ("EP '260"). Applicant traverses this rejection for the following reasons.

The Examiner states that EP '260 discloses a ground soy product having a particle size between 0.1 and 20 microns wherein the product is used in a variety of food products including milk and icings; and wherein the product would be expected to have open portions such that water or a water based liquid is allowed into intracellular spaces since the same has been ground to such a fine level. The Examiner also states

that it is expected that the product would have the stability as recited in the instant claims due to the similarity in processing and the dry nature of the product.

Applicant respectfully disagrees that the EP '260 product would inherently have the same open portions as the soya fiber particulate of claim 102. There is no indication that the EP '260 particulates would have the same characteristics as the soya fiber particulate of claim 102. The EP '260 particle begins with a dry ground commercially available soy product (Fibrim 1250) which is then slurried and ground at 50°C to 60°C (EP '260, page 6, Examples 1-16), whereas the soya fiber particulate of claim 102 is wet ground directly from whole soybeans at 95°C. Given these differences in characteristics between the process of EP '260 and the process to form the soya fiber particulate of claim 102, there is no evidence that the EP '260 particulates would inherently have the same structure as soya fiber particulate of claim 102. Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) over EP '260 be withdrawn.

Wallis

Claims 102-128, 130-143, 156-159, 161-175, 177-189, 193, 194, and 196-200 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by U.S. Patent No. 6,244,528 to Wallis et al. ("Wallis"). Applicant traverses this rejection for the following reasons.

The Examiner states that Wallis discloses a ground soybean product having a particle size between 5 and 25 microns wherein the product is used in a variety of food products including soymilk, tofu, and dairy analogs; and wherein the product would be expected to have open portions such that water or a water based liquid is allowed into intracellular spaces since the same has been ground to such a fine level. The Examiner also states that it is expected that the product would have the stability as recited in the instant claims due to the similarity in processing and the dry nature of the product.

Applicant respectfully disagrees that the Wallis product would inherently have the same open portions as claimed in the soya fiber particulate of claim 102 and the grain fiber particulate of claim 175. There is no indication that the Wallis particulates would have the same characteristics as the soya fiber particulate of claim 102 and the

grain fiber particulate of claim 175. The raw soybeans of the Wallis process are dry ground under constant humidity (40 to 50%) and at a temperature of 0°C to 50°C (Wallis, column 1, line 66 to column 2, line 26), whereas the soya fiber particulate of claim 102 and the grain fiber particulate of claim 175 are wet ground directly from soybeans at 95°C. As discussed herein, dry grinding may result in oxidation of the seed oil in the particles (particularly if the lipoxidase enzymes are not deactivated prior to grinding). The Wallis process yields a coarse product and a finished product which are then separated by an air classifier (Wallis, column 2, lines 27-40), whereas the soya fiber particulate of claim 102 and the grain fiber particulate of claim 175 having the claimed sizes are formed without a size separation step. Given these differences in characteristics between the process of Wallis and the process to form the soya fiber particulate of claim 102 and the grain fiber particulate of claim 175, there is no evidence that the Wallis particulates would inherently have the same structure as the soya fiber particulate of claim 102 and the grain fiber particulate of claim 175. Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) over Wallis be withdrawn.

Mustakas

Claims 102-128, 130-143, 156-159, and 161-174 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by U.S. Patent No. 3,639,129 to Mustakas et al. ("Mustakas"). Applicant traverses this rejection for the following reasons.

The Examiner states that Mustakas discloses a ground soy product having a particle size between 5 and 40 microns wherein the product is employed in soymilk and wherein the product would be expected to have open portions such that water or a water based liquid is allowed into intracellular spaces since the same has been ground to such a fine level. The Examiner also states that it is expected that the product would have the stability as recited in the instant claims due to the similarity in processing and the dry nature of the product.

Applicant respectfully disagrees that the Mustakas product would inherently have the same open portions as claimed in the soya fiber particulate of claim 102. There is no indication that the Mustakas particulates would have the same

characteristics as the soya fiber particulate of claim 102. The Mustakas process begins with full-fat soy flour which is then wet milled at room temperature (Mustakas, column 1, line 74 to column 2, line 34), whereas the soya fiber particulate of claim 102 is wet ground directly from soybeans at 95°C. The full-fat soy flour starting material of Mustakas would also have problems with oxidation as with any dry ground product. Given these differences in characteristics between the process of Mustakas and the process to form the soya fiber particulate of claim 102, there is no evidence that the Mustakas particulates would inherently have the same structure as the soya fiber particulate of claim 102. Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) over Mustakas be withdrawn.

GB '470

Claims 102-128, 130-143, 156-159, and 161-174 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by British Patent No. GB 1400470 ("GB '470"). Applicant traverses this rejection for the following reasons.

The Examiner states that GB '470 discloses a ground soybean product having a particle size between 2 and 10 microns wherein the product is employed in beverages and wherein the product would be expected to have open portions such that water or a water based liquid is allowed into intracellular spaces since the same has been ground to such a fine level. The Examiner also states that it is expected that the product would have the stability as recited in the instant claims due to the similarity in processing and the dry nature of the product.

Applicant respectfully disagrees that the product of GB '470 would inherently have the same open portions as claimed in the soya fiber particulate of claim 102. There is no indication that the GB '470 particulates would have the same characteristics as the soya fiber particulate of claim 102. The process of GB '470 grinds the soybeans to a particle size between 270 and 300 U.S. Standard mesh (53 microns to about 48 microns) (GB '470, page 2, lines 61-63) and are then further reduced in size during homogenization (GB '470, page 1, lines 56-60), whereas the soya fiber particulate of claim 102 is wet ground directly to the claimed particle size from soybeans at 95°C. The particle suspension in GB '470 is unstable as evidenced by the removal of coarser particles by centrifugation (GB '470, page 2, lines 116-124), whereas the

suspension of the soya fiber particulate of claim 102 is stable to centrifugation. Given these differences in characteristics between the process of GB '470 and the process to form the soya fiber particulate of claim 102, there is no evidence that the GB '470 particulates would inherently have the same structure as the soya fiber particulate of claim 102. Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) over GB '470 be withdrawn.

Sudo

Claims 102-128, 130-143, 156-159, and 161-174 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by U.S. Patent No. 4,902,526 to Sudo et al. ("Sudo"). Applicant traverses this rejection for the following reasons.

The Examiner states that Sudo discloses a ground soybean product having a particle size below 50 microns wherein the product is employed in beverages and wherein the product would be expected to have open portions such that water or a water based liquid is allowed into intracellular spaces since the same has been ground to such a fine level. The Examiner also states that it is expected that the product would have the stability as recited in the instant claims due to the similarity in processing and the dry nature of the product.

Applicant respectfully disagrees that the Sudo product would inherently have the same open portions as claimed in the soya fiber particulate of claim 102. There is no indication that the Sudo particulates would have the same characteristics as the soya fiber particulate of claim 102. The process of Sudo soaks the hulled soybeans in water for at least 12 hours before grinding (Sudo, claim 1, column 8, lines 1-3), whereas the soya fiber particulate of claim 102 is wet ground directly to the claimed particle size from dehulled soybeans. The particle compositions of Sudo use the addition of a vegetable fat for making a stable emulsion (Sudo, column 5, lines 43-67), whereas the suspension of the soya fiber particulate of claim 102 is stable without addition of vegetable fat. Given these differences in characteristics between the process of Sudo and the process to form the soya fiber particulate of claim 102, there is no evidence that the Sudo particulates would inherently have the same structure as the soya fiber particulate of claim 102. Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) over Sudo be withdrawn.

JP '247

Claims 102-128, 130-143, 156-159, and 161-174 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by Japanese Patent No. JP 60-141247 ("JP '247"). Applicant traverses this rejection for the following reasons.

The Examiner states that JP '247 discloses a ground soybean product having a particle size below 10 microns wherein the product is employed in food products and wherein the product would be expected to have open portions such that water or a water based liquid is allowed into intracellular spaces since the same has been ground to such a fine level. The Examiner also states that it is expected that the product would have the stability as recited in the instant claims due to the similarity in processing and the dry nature of the product.

Applicant respectfully disagrees that the product of JP '247 would inherently have the same open portions as claimed in the soya fiber particulate of claim 102. There is no indication that the JP '247 particulates would have the same characteristics as the soya fiber particulate of claim 102. The process of JP '247 includes dry milling of the soy beans to a size of less than 20 μm (JP '247, claim 1, page 253), whereas the soya fiber particulate of claim 102 is wet ground directly to the claimed particle size from dehulled soybeans. Indeed, JP '247 states that dry grinding is superior to wet grinding (JP '247, paragraph spanning pages 253-254), implying that the particle characteristics are different. As discussed above, dry grinding may result in oxidation of the seed oil in the particles (particularly if the lipoxidase enzymes are not deactivated prior to grinding). Given these differences in characteristics between the process of JP '247 and the process to form the soya fiber particulate of claim 102, there is no evidence that the JP '247 particulates would inherently have the same structure as the soya fiber particulate of claim 102. Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) over JP '247 be withdrawn.

WO '055

Claims 175, 178-183, 186-189, 193, 194, and 196-200 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by PCT Publication No. WO 01/64055 ("WO '055"). Applicant traverses this rejection for the following reasons.

The Examiner states that WO '055 discloses a ground wheat product having a particle size between 18-25 microns wherein the product is employed in food products and wherein the product would be expected to have open portions such that water or a water based liquid is allowed into intracellular spaces since the same has been ground to such a fine level. The Examiner also states that it is expected that the product would have the stability as recited in the instant claims due to the similarity in processing and the dry nature of the product.

The following are English machine translations of the passages cited by the Examiner:

Page 10, lines 15-32

Within the framework of this invention, the purpose of the turboseparation is to modify the relationship between the insoluble proteins, starch and fibers, as well as the quality of proteins and the pentoses. Crushing is carried out so that 60 % of weating passes through a sieve of 80 μ . Then from the tuboseparation of flour, three fractions are separated. The fine fraction gives the extract or the additive which will be incorporated in the end product. Within the framework of the selected nonrestrictive example for this description, the extract or the additive constitutes the "corn Cream".

This "corn Cream" accounts for 45% of the total weight of the three fractions, its average granulometry is lower than 20 μ . The distribution being as follows: 25% of volume consist of lower particles 10 μ , 60% of particles lower than 20 μ , 93% lower than 50 μ , 98% lower than 80 μ these granulometric measurements are carried out with a laser particle-measurement instrument Mastersize from Malven.

Page 12, lines 15-20

The granulometry of the fraction of corn weating, impoverished of insoluble fibers lies between 10 and 40 μ , more precisely included/ understood between 15 and 30 μ and preferentially between 18 and 25 μ .

Applicant respectfully disagrees that the product of WO '055 would inherently have the same open portions as claimed in the grain particulate of claim 175. There is no indication that the WO '055 particulates would have the same characteristics as the grain particulate of claim 175. The process of WO '055 includes dry milling of the grain to give three fractions and separating the fractions, whereas the grain particulate of claim 175 is wet ground directly to give a single fraction containing

the claimed particle size from the grain. As discussed above, dry grinding may result in oxidation of the seed oil in the particles (particularly if the lipoxidase enzymes are not deactivated prior to grinding). Given these differences in characteristics between the process of WO '055 and the process to form the grain particulate of claim 175, there is no evidence that the WO '055 particulates would inherently have the same structure as the grain particulate of claim 175. Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) over WO '055 be withdrawn.

Loh

Claims 175, 178-183, 186-189, 193, 194, and 196-200 stand rejected under 35 U.S.C. § 102(e) as assertedly being anticipated by U.S. Patent No. 6,149,962 to Loh et al. ("Loh"). Applicant notes that the Office Action referred to a reference by "Tsukuda et al." which was not included in the references list provided by the Examiner. Applicant's representative contacted Examiner Weier who confirmed that the correct citation was to U.S. Patent 6,149,962. Applicant traverses this rejection for the following reasons.

The Examiner states that Loh discloses a ground wheat fiber product having a particle size between 1 and 30 microns wherein the product is employed in edible products including beverages and wherein the product would be expected to have open portions such that water or a water based liquid is allowed into intracellular spaces since the same has been ground to such a fine level. The Examiner also states that it is expected that the product would have the stability as recited in the instant claims due to the similarity in processing and the dry nature of the product.

Applicant respectfully disagrees that the product of Loh would inherently have the same open portions as claimed in the grain particulate of claim 175. There is no indication that the Loh particulates would have the same characteristics as the grain particulate of claim 175. The process of Loh includes co-micromilling inulin (10%-45%) and wheat fiber (up to 15%) in water to give a gel (Loh, column 2, lines 58-65), whereas the grain particulate of claim 175 are wet ground directly (i.e., without other additives) to give a single fraction containing the claimed particle size from the grain. The fiber particles of Loh may act as nucleation sites to allow the inulin to crystallize out of solution onto the surface of the fiber particles (Loh, column 5, lines 34-51). Thus, the

Loh particulates will not have open portions such that water or a water based liquid is allowed into intracellular spaces. Given these differences in characteristics between the process and particles of Loh and the grain particulate of claim 175, there is no evidence that the Loh particulates would inherently have the same structure as the grain particulate of claim 175. Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) over Loh be withdrawn.

New Claims 201-204

Applicant has demonstrated that the particles of the cited references would not inherently have open portions therein such that water or a water based liquid is allowed into intracellular spaces of the fiber particulate as stated by the Examiner. Further, none of the cited references teach a soya fiber particulate or a grain fiber particulate having a mean particle size of about 22 microns and wherein 90% of the particles are less than 44 microns or a mean particle size of about 24 microns and wherein 90% of the particles are less than 45 microns as set forth in new claims 201-204. Thus, none of the cited references disclose each and every element of any one of new claims 201-204. Applicant respectfully requests allowance of all pending claims including new claims 201-204.

CONCLUSION

Applicants submit that claims 102-128, 130-143, 156-159, 161-175, 177-183, 185-189, 193, 194, and 196-204 of the subject application recite novel and non-obvious soya fiber particulates and grain fiber particulates. In view of the amendments and remarks presented above, Applicants respectfully submit that the subject application is in condition for allowance. Accordingly, reconsideration of the rejections and allowance of all pending claims is earnestly solicited.

If the undersigned can be of assistance to the Examiner in addressing issues to advance the application to allowance, please contact the undersigned at the number set forth below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'J. L. Kent', is written over a horizontal line.

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